

PATENT APPLICATION
DOCKET # 0001-0004

"EXPRESS MAIL" Mailing Label No.EL 000622141 US.
Date of DepositJune 25, 2003.....

MULTI-SECTIONED CONTAINER

BACKGROUND OF THE INVENTION

Technical Field of the Invention

[0001] This invention relates to containers for holding articles or substances. More particularly, and not by way of limitation, the present invention is directed to an expandable or shrinkable container such as a jar having a plurality of stacked sections.

Description of Related Art

[0002] People have used containers such as jars for thousands of years to hold various articles and substances. A continuing problem with existing containers is encountered when use of the articles or substance causes the level of the articles or substance in the jar to fall to a level at which it is inconvenient or difficult to extract more of the articles or substance. A typical example found in most households today is a mayonnaise jar. When the level of mayonnaise falls within the jar, it becomes difficult to reach and extract the mayonnaise with the typical butter knife used for that purpose.

PATENT APPLICATION
DOCKET # 0001-0004

Many people resort to the use of a spatula or other longer-handled kitchen utensil to extract mayonnaise at the bottom of the jar, but it is still a cumbersome and inconvenient task.

[0003] In order to overcome the disadvantage of existing solutions, it would be advantageous to have a shrinkable container that can be reduced in height as the level of the articles or substance within the container falls. The present invention provides such a container.

[0004] Another continuing problem with existing containers is encountered when a particular container is too small to hold the articles or substance that the user desires to place into the container. For example, a chef may desire to cook more of an item such as soup than is needed for a particular meal. However, when the chef attempts to pour the excess soup into a jar, it is discovered that the jar is not quite large enough. Therefore, the remainder of the soup must either be placed in another container or be discarded.

[0005] A user may also have the need to store in a container, items that have a length that is longer than the height of the container. In this case, the user may find it impossible to put a lid on the container, and the items must be left exposed. Additionally, a taller container may be needed to stabilize items that are placed in the container. For example, a florist may place short-stemmed flowers in a short vase, but long-stemmed flowers must be placed in a taller vase to keep them from falling over. Therefore, several vases must be kept on hand to match the type of flowers being used.

[0006] In order to overcome the disadvantage of existing solutions, it would be advantageous to have an expandable

container that can be increased in height in order to hold more articles or substance as required. Such a container could also be increased in height to hold articles having a length that exceeds the height of the un-expanded container. The present invention provides such a container.

[0007] There is also a need for children's articles that teach valuable information and skills to the children while entertaining them as well. For example, children develop manual dexterity by repeatedly performing tasks with various objects with their hands. Children also learn to recognize colors by playing with objects of different colors. Additionally, children learn higher cognitive skills by playing with items that require them to recognize patterns or shapes, and to place the items in proper relation to each other to form the patterns or shapes. Children also learn to recognize the volume relationship between a container, and a number of items or a quantity of a substance (such as sand or water), by repeatedly filling the container with the items or substance. It would be advantageous to have a container that fulfills all of the above needs for teaching children. The present invention provides such a container.

SUMMARY OF THE INVENTION

[0008] The present invention is directed to a multi-sectioned container comprising a bottom section and at least one upper section that stacks thereon. The bottom section includes a bottom surface and at least one side-wall that includes, at a top portion thereof, connecting means for connecting the bottom section to an upper section stacked

thereon. The upper section includes at least one side-wall that is configured in a bottom portion thereof to interact with the bottom-section connecting means to connect the upper section to the bottom section. In addition, the upper-section side-wall includes at a top portion thereof, connecting means for connecting the upper section, selectively, to another upper section or a lid. In one embodiment, the connecting means includes screw threads for screwing the sections together. In another embodiment, the connecting means includes means for snapping the sections together.

[0009] In another aspect, the multi-sectioned container includes a plurality of sections that are each colored a different color. In this embodiment, the container may be used to teach the colors to a child while the child also develops manual dexterity by joining the sections or taking the sections apart.

[0010] In yet another aspect, the multi-sectioned container may function as a tool to teach children more advanced cognitive skills. In this embodiment, a drawing or pattern is drawn on the surface of the container in such a way that the drawing overlaps more than one section. If the container is taken apart, the child must recognize the proper order of the sections, and must put the container back together with the sections in the proper order to put the drawing properly back together.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The invention will be better understood and its numerous objects and advantages will become more apparent to those skilled in the art by reference to the following drawings, in conjunction with the accompanying specification, in which:

[0012] FIG. 1 is a perspective view of a first embodiment of the present invention in which a multi-sectioned container includes a lid and three sections joined together by screw threads;

[0013] FIG. 2 is an exploded perspective view of the multi-sectioned container of FIG. 1A with the lid and three sections separated;

[0014] FIG. 3 is a perspective view of the multi-sectioned container of FIG. 1 with the uppermost section removed and the lid screwed onto the center section;

[0015] FIG. 4 is a perspective view of a second embodiment of the present invention in which a multi-sectioned container includes a lid and three sections that snap together; and

[0016] FIG. 5 is a partial vertical cross-sectional view of a side-wall of the multi-sectioned container of FIG. 4 taken along line 5-5 and showing an exemplary construction of the snapping mechanism connecting the sections.

DETAILED DESCRIPTION OF EMBODIMENTS

[0017] FIG. 1 is a perspective view of a first embodiment of the present invention in which a multi-sectioned container 10 includes a lid 11 and three sections 12-14 joined together by screw threads 15. Each section is externally threaded at the top, and each section, except the bottom section 14 is internally threaded at the bottom. Thus, each section other than the bottom section is essentially a tube with alternating internal and external screw threads at each end. The center section 13 screws onto the bottom section 14, the top section 12 screws onto the center section 13, and the lid 11 screws onto the top section 12. In this embodiment, the multi-sectioned container may be constructed of any suitable material utilized for containers. For example, for foodstuffs, the container may be constructed of glass or plastic. For other items, the container may be constructed, for example, from stainless steel or other type of metal.

[0018] FIG. 2 is an exploded perspective view of the multi-sectioned container of FIG. 1 with the lid 11 and three sections 12-14 separated. This view illustrates that each section is externally threaded at the top, and each section, except the bottom section 14 is internally threaded at the bottom. The outside diameter of the externally threaded portion 12a-14a of each section is slightly smaller than the outside diameter of the remainder of the section. This enables the internally threaded portion 12b and 13b of the top and center sections, respectively, to be screwed onto the externally threaded portions of the sections below while maintaining a constant outside diameter of the resulting

PATENT APPLICATION
DOCKET # 0001-0004

expanded container 10. The lid 11 is sized to screw onto the externally threaded portion of any of the sections.

[0019] It is noted that the top section 12 and the center section 13 are essentially identical, and are interchangeable. In addition, additional sections may be screwed onto the top section, and sequentially to each other, to further expand the capacity of the multi-sectioned container 10. Each section may also be colored a different color, either for decorative reasons, or for an embodiment in which the container is used to educate a child. With this embodiment, a child may learn to identify different colors, and can practice and develop manual dexterity by building containers of different colors and sizes.

[0020] Alternatively, a drawing or pattern may be drawn on the surface of the container in such a way that the drawing overlaps more than one section. If the container is taken apart, the child must recognize the proper order of the sections, and must put the container back together with the sections in the proper order to put the drawing properly back together. In this way, the container may be used to teach more advanced cognitive skills.

[0021] The container may also be utilized to teach children the relationship between the size of a container, and the volume of a substance (such as sand or water), or the number of items in a group of items (such as marbles, building blocks, or small toys) that can be placed in the container. By building smaller or larger containers, the child learns that the number of items that can be placed in the container decreases or increases, respectively.

[0022] FIG. 3 is a perspective view of the multi-sectioned container 10 of FIG. 1 with the uppermost section 12 removed and the lid 11 screwed onto the center section 13. As the level of any articles or substance stored within the container falls, sections may be removed for easier access to the remaining articles or substance. Ultimately, the lid may be screwed directly onto the bottom section 14.

[0023] FIG. 4 is a perspective view of a second embodiment of the present invention in which a multi-sectioned container 20 includes a lid 21 and three sections 22-24 that snap together. By simply pressing two of the sections together until they snap into place, the container can be expanded. Likewise, the container can be reduced in size by simply pulling the sections apart. It should also be understood that although a container having a square cross-section is illustrated in FIG. 4, the container of this embodiment may have a cross-section of other geometric shapes. For example, the cross-section could also be circular, triangular, rectangular, and the like.

[0024] FIG. 5 is a partial vertical cross-sectional view of a side-wall of the multi-sectioned container of FIG. 4 taken along line 5-5 and showing an exemplary construction of the snapping mechanism connecting the sections. The drawing is lined to show that in this embodiment, the container is preferably constructed of a plastic that is elastic enough to allow the sections to be joined together or separated without requiring the application of undue force by the user. The container could also be constructed of thin metal, or other

PATENT APPLICATION
DOCKET # 0001-0004

suitable material that will not break under the stress of joining or separating the sections.

[0025] As illustrated in FIG. 5, the thickness of the side-wall of each section may be reduced in the area where the two sections overlap and snap together. A bead 25 may be formed in one of the sections, and may snap into a corresponding groove formed in the other section. As illustrated, the bead 25 is formed on the top section 22, and snaps into a corresponding groove formed in the center section 23. Of course, the bead may also be formed on the center section 23, and may snap into a corresponding groove formed in the top section 22. Other suitable configurations for snapping the two sections together may also be utilized, as the illustrated configuration is exemplary only.

[0026] The bead 25, as illustrated in FIG. 5, may not form a water-tight seal. Therefore, this embodiment may be better suited for dry goods. However, in another embodiment, the bead 25 may also be a rubber seal or, for circular containers, an o-ring that fits into a groove in the top section 22. In this manner, a water-tight seal may be formed between the joined sections so that the container may be utilized for liquids.

[0027] It is thus believed that the operation and construction of the present invention will be apparent from the foregoing description. While the multi-sectioned container shown and described has been characterized as being preferred, it will be readily apparent that various changes and modifications could be made therein without departing from the scope of the invention as defined in the following claims.